

REMARKS/ARGUMENTS

The status of the claims is summarized below.

Claims 7-12 and 19-22 are cancelled per the restriction requirement response filed on October 20, 2004. In addition, claims 5 and 16 are cancelled.

5 Claims 1-4, 6, 13-15, and 17-18 are currently amended.

Claims 23-26 are new.

Claims 1-4, 6, 13-15, 17-18, and 23-26 are pending in the application after entry of this Amendment.

10 **Rejections under 35 U.S.C. § 112**

Claim 4 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. This rejection is respectfully traversed.

15 The Office has indicated that it is not clear what is meant by the phrase "random pattern", because the term "pattern" implies that the motion is predictable rather than random. The Applicants have amended claim 4 to replace the phrase "random pattern" with the phrase "random manner." In view of the foregoing amendment to claim 4, the Office is respectfully requested to withdraw the rejection of claim 4 under 35 U.S.C. 112, second paragraph.

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Rejections under 35 U.S.C. § 102

Claims 1-3 and 6 were rejected under 35 U.S.C. §102(b) as being anticipated by Sandhu et al., ("Sandhu" hereafter) (U.S. Patent No. 5,975,994). These rejections are respectfully traversed.

Claim 1 has been amended to clarify that the oscillation mechanics are capable of moving the shaft in an oscillatory manner such that the conditioning substrate is moved about a centroid of the conditioning substrate.

Sandhu teaches that the shaft (161) to which the conditioning element (170) is attached can be rotated by an actuator (166c). Sandhu further teaches that the shaft (161) can be moved in a transverse direction (T_2) along the arm (164). Sandhu also teaches that the arm (164) can be rotated in a horizontal plane about an axis (V_2 - V_2). However, Sandhu does not include any teaching of oscillation mechanics capable of moving the shaft (161) in an oscillatory manner such that the conditioning element (170) is moved about a centroid of the conditioning element (170). Thus, Sandhu does not teach the oscillation mechanics as recited in claim 1.

In view of the foregoing, the Applicants respectfully submit that Sandhu fails to teach each and every element of claim 1, as required to support a rejection under 35 U.S.C. 102. Thus, the Applicants respectfully submit that amended claim 1 is patentable in view of Sandhu.

Please note that claims 2-3 and 6 have been amended to coordinate with the amendments to claim 1. The Applicants respectfully submit that claims 2-3 and 6 are patentable with respect to Sandhu for at least the reasons provided for amended claim 1, from which claims 2-3 and 6 depend.

Claims 13-15 and 17 were rejected under 35 U.S.C. §102(b) as being anticipated by Wada et al., ("Wada" hereafter) (U.S. Patent No. 6,190,243). These rejections are respectfully traversed.

Wada teaches the use of a plurality of pressing elements (44) in the shape of rollers to directly press on the polishing pad such that a configuration of the polishing pad surface is adjusted to optimize pressures between the wafer and the polishing pad. It should be noted that the pressing elements (44) of Wada are applied directly to the

polishing pad and not to a backside of a conditioning substrate. The Office has asserted that the pressing elements (44) of Wada represent the conditioning apparatus of claim 13. However, the pressing elements (44) of Wada have no correspondence to the conditioning apparatus of claim 13.

5 The conditioning apparatus of claim 13 includes a conditioning substrate and a conditioning substrate backing having particular characteristics. Wada does not teach a conditioning substrate having an active side and a backside, as required by claim 13. Furthermore, Wada does not teach a conditioning substrate backing that defines a pressure distribution capable of being applied to the backside of the conditioning
10 substrate, as required by claim 13. Simply speaking, the pressing elements (44) of Wada do not teach or suggest the conditioning substrate or conditioning substrate backing of claim 13. If the Office continues to assert that Wada does teach the features of claim 13, the Applicants respectfully request the Office to provide a thorough and specific explanation of how Wada is being asserted to teach each feature of claim 13.

15 In view of the foregoing, the Applicants respectfully submit that Wada fails to teach each and every element of claim 13, as required to support a rejection under 35 U.S.C. 102. Thus, the Applicants respectfully submit that claim 13 is patentable in view of Wada. Furthermore, because each of claims 14-15 and 17 depend from claim 13, the Applicants submit that each of claims 14-15 and 17 is patentable for at least the reasons
20 provided for claim 13.

Claims 13 and 17-18 were rejected under 35 U.S.C. §102(b) as being anticipated by Ploessl (U.S. Patent No. 5,885,137). These rejections are respectfully traversed.

Ploessl teaches a polishing pad conditioner having a body portion (90) that includes a cavity (92). Ploessl also teaches that a flexible membrane (94), having
25 conditioning elements (98) mounted on the bottom surface thereof, is used to enclose the cavity (92). Thus, a change in fluid pressure within the cavity (92) will cause the flexible

membrane (94) to be either concave or convex. It should be noted, however, that Ploessl teachings are limited to the use of a single cavity (92) behind the entire flexible membrane (94).

5 The cavity (92) as taught by Ploessl is only capable of applying a single fluid pressure across the entire flexible membrane (94). Thus, the polishing pad conditioner of Ploessl is not capable of applying a differential pressure distribution across the flexible membrane (94). Therefore, with respect to claim 13, as amended, Ploessl does not teach a conditioning substrate backing capable of defining a differential pressure distribution across the backside of the conditioning substrate, whereby different pressures can be
10 applied to specific regions of the backside of the conditioning substrate.

In view of the foregoing, the Applicants respectfully submit that Ploessl fails to teach each and every element of claim 13, as required to support a rejection under 35 U.S.C. 102. Thus, the Applicants respectfully submit that claim 13 is patentable in view of Ploessl. Furthermore, because each of claims 17-18 depend from claim 13, the
15 Applicants submit that each of claims 17-18 is patentable for at least the reasons provided for claim 13.

New Claims

Please note that claims 23-26 are new in the present Amendment.

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Allowable Subject Matter

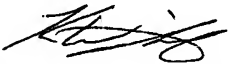
The Applicants acknowledge the Office's statement that claims 5 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any
25 intervening claims. Please note that new claim 25 has been introduced as a combination of claim 5 and claim 1. Thus, according to the Office's statement, new claim 25 should be

allowable. Please note that new claim 26 has been introduced as a combination of claim 16 and claim 13. Thus, according to the Office's statement, new claim 26 should be allowable.

Additionally, the Applicants acknowledge the Office's statement that claim 4 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, second paragraph, as set forth in the Office Action to which this Amendment replies. As previously discussed, claim 4 is amended to overcome the rejection under 35 U.S.C. 112, second paragraph.

The Applicants respectfully submit that all of the pending claims (1-4, 6, 13-15, 17-18, and 23-26) are in condition for allowance. Therefore, a notice of allowance is requested. If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6914. Also, if any additional fees are due in connection with filing this Amendment, the Commissioner is authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P435). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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